

WHAT IS CLAIMED IS:

1. A combustion apparatus for NO_x reduction by suppressing temperature of combustion gas derived from a burner, comprising:

5 NO_x reduction means having an excess air ratio versus NO_x characteristic that generated NO_x value decreases with increasing excess air ratio of the burner, and an excess air ratio versus CO characteristic that exhaust CO value increases with increasing excess air
10 ratio; and

excess-air-ratio control means for controlling the excess air ratio of the burner to a specified excess air ratio,

wherein the excess-air-ratio control means
15 includes outside-air temperature detection means and controls the excess air ratio to the specified excess air ratio based on a detection signal derived from the outside-air temperature detection means.

2. A combustion apparatus for NO_x reduction as
20 claimed in claim 1, wherein the excess-air-ratio control means includes combustion-use-air flow rate adjusting means provided on an air supply passage and serving for feeding combustion-use air to the burner, and the combustion-use-air flow rate adjusting means controls an opening of the
25 combustion-use-air flow rate adjusting means based on a

detection signal derived from the outside-air temperature detection means, thereby fulfilling the control to the specified excess air ratio.

3. A combustion apparatus for NO_x reduction as
5 claimed in claim 2, wherein the combustion-use-air flow rate adjusting means includes: a damper; positioning means for determining rotational position of the damper; and fine adjustment means for acting on the positioning means to finely adjust the rotational position of the damper in
10 response to a detected temperature of the outside-air temperature detection means.

4. A combustion apparatus for NO_x reduction as claimed in claim 1, wherein the excess-air-ratio control means controls rotational speed of a blower, which feeds
15 combustion-use air to the burner, based on a detection signal derived from the outside-air temperature detection means, thereby fulfilling the control to the specified excess air ratio.